AMENDMENT TO CLAIMS

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1. (Previously Presented) An apparatus for increasing a specific density and an energy content of a gas comprising:

a pressure resistant piping system equipped with means for closing and opening said piping system;

means for filling up said piping system with a gas and means for compressing said gas to a desired pressure;

means for generating a submerged magnetic field within said piping system;

means for delivering an electric power to said means for generating the submerged magnetic field within said piping system;

means for recirculating said gas through said means for generating the submerged magnetic field; and

means for collecting a resultant processed gas,

wherein the resulting processed gas has a specific density and an energy content bigger than corresponding values of the gas originally first filled into the piping system.

2. (Previously Presented) The apparatus according to Claim 1, wherein the electric current of said means for generating the submerged magnetic field is continuous.

3. (Previously Presented) The apparatus according to Claim 1, wherein the electric current of said means for generating the submerged magnetic field is alternating.

4. (Previously Presented) The apparatus according to Claim 1, wherein the electric current of said means for generating the submerged magnetic field is pulsing.

5. (Original) The apparatus according to Claim 1, wherein said gas is hydrogen.

6. (Original) The apparatus according to Claim 1, wherein said gas is oxygen.

7. (Original) The apparatus according to Claim 1, wherein said gas is a non-combustible gas.

8. (Original) The apparatus according to Claim 1, wherein said gas is a gaseous hydrocarbon fuel.

9. (Original) The apparatus according to Claim 1, wherein said gas is a liquid vapor.

10. (Previously Presented) The apparatus according to Claim 1, further comprising:

means for restricting the flow of said gas along a slit surrounding said means for generating the submerged magnetic field.

11. (Withdrawn) An apparatus for increasing a specific density and an energy content of a gas comprising:

a pressure resistant piping system equipped with means for closing and opening said piping system;

means for filling up said piping system with a gas and means for compressing said gas to a desired pressure;

at least one solenoid acting on a tube in line with said piping system;

means for delivering an electric current to said at least one solenoid;

means for cooling said solenoid;

means for recirculating said gas through said tube; and

means for collecting a resultant processed gas,

wherein the resulting processed gas has a specific density and an energy content bigger than corresponding values of the gas first filled into the piping system.

12. (Withdrawn) The apparatus according to Claim 11, wherein the electric current of said solenoid is continuous.

13. (Withdrawn) The apparatus according to Claim 11, wherein the electric current of said solenoid is alternating.

14. (Withdrawn) The apparatus according to Claim 11, wherein the electric current of said solenoid is pulsing.

15. (Withdrawn) The apparatus according to Claim 11, wherein said gas is hydrogen.

16. (Withdrawn) The apparatus according to Claim 11, wherein said gas is oxygen.

17. (Withdrawn) The apparatus according to Claim 11, wherein said gas is a non-combustible gas.

18. (Withdrawn) The apparatus according to Claim 11, wherein said gas is a gaseous hydrocarbon fuel.

19. (Withdrawn) The apparatus according to Claim 11, wherein said gas is a liquid vapor.

20. (Withdrawn) The apparatus according to Claim 11, wherein a number of said solenoids is placed in series and a number of said solenoids is placed in parallel within said piping system.

21. (Withdrawn) An apparatus for the production of a hydrogen gas with an increase of a specific density and of an energy content comprising:

a pressure resistant vessel filled up with a liquid feedstock rich in hydrogen;

at least one pair of electrodes placed in such a way to create a submerged electric arc;

means for delivering an electric power to said at least one pair of electrodes;

means for collecting a combustible gas produced by said submerged electric arc; and

means for separating a hydrogen content of said combustible gas, the hydrogen content comprising a resultant processed hydrogen gas,

wherein the resultant processed hydrogen gas has a specific weight and energy content greater than a corresponding value for conventional hydrogen gas.

22. (Withdrawn) The apparatus according to Claim 21, wherein said resultant processed hydrogen gas is separated from said combustible gas with filtration means.

23. (Withdrawn) The apparatus according to Claim 21, wherein said resultant processed hydrogen gas is separated from said combustible gas with means for cryogenically liquefaction of remaining components.

24. (Withdrawn) A method of increasing the voltage, power and efficiency of a fuel cell comprising:

operating said fuel cell with a processed gas which has a specific density and an energy content bigger than corresponding values of an original gas prior to being processed.

25. (Withdrawn) The method according to claim 24, wherein the processed gas is made by recirculating the original gas in a pressure resistant piping system, by compressing said original gas to a desired pressure, and by subjecting the recirculated original gas to generated electric arcs created by at least one pair of electrodes within an interior of the piping system.

26. (Withdrawn) The method according to Claim 24, wherein the original gas is one of hydrogen and oxygen.

27. (Withdrawn) The method according to Claim 26, wherein the processed gas is MagH when hydrogen is the original gas and MagO when oxygen is the original gas.

28. (Withdrawn) A method of operating an internal combustion engine with a decreased need for atmospheric oxygen comprising:

operating said engine with a processed fuel made from a processed hydrogen gas, the processed hydrogen gas having a specific weight and energy content greater than a corresponding value for conventional hydrogen gas.

29. (Withdrawn) The method according to Claim 28, wherein the processed hydrogen gas is made by filling a pressure resistant vessel with a liquid feedstock rich in hydrogen, by subjecting said feedstock to submerged electric arcs between at least one pair of electrodes, by collecting a combustible gas produced by a thermochemical reaction of the electric arcs on the feedstock, and by separating the processed hydrogen gas from said combustible gas.

30. (Withdrawn) The method according to Claim 29, wherein the processed hydrogen gas is separated with filtration means.

31. (Withdrawn) The method according to Claim 29, wherein the processed hydrogen gas is separated using means for cryogenically liquefaction of remaining components.

32. (Withdrawn) The method according to claim 28, wherein the processed fuel includes the processed hydrogen gas in the presence of carbon and oxygen, and the processed hydrogen is MagH.

33. (Previously Presented) A method for increasing a specific density and an energy content of a gas comprising:

providing a pressure resistant piping system equipped with means for closing and opening said piping system;

providing means for filling up said piping system with a gas and means for compressing said gas to a desired pressure;

providing means for generating a submerged magnetic field within said piping system;

providing means for delivering an electric power to said means for generating the submerged magnetic field;

providing means for recirculating said gas through said means for generating the submerged magnetic field;

providing means for collecting a resultant processed gas; and

filling said piping system with the gas, recirculating the gas through the means for generating a submerged magnetic field within said piping system and collecting the resultant processed gas,

wherein the resulting processed gas has a specific density and an energy content bigger than corresponding values of the gas originally first filled into the piping system.

34. (Previously Presented) The method according to Claim 33, wherein the electric current of said means for generating the submerged magnetic field is continuous.

35. (Previously Presented) The method according to Claim 33, wherein the electric current of said means for generating the submerged magnetic field is alternating.

36. (Previously Presented) The method according to Claim 33, wherein the electric current of said means for generating the submerged magnetic field is pulsing.

37. (Original) The method according to Claim 33, wherein said gas is hydrogen.

38. (Original) The method according to Claim 33, wherein said gas is oxygen.

39. (Original) The method according to Claim 33, wherein said gas is a non-combustible gas.

40. (Original) The method according to Claim 33, wherein said gas is a gaseous hydrocarbon fuel.

41. (Original) The method according to Claim 33, wherein said gas is a liquid vapor.

42. (Previously Presented) The method according to Claim 33, further comprising:

providing means for restricting the flow of said gas along a slit surrounding said means for generating the submerged magnetic field.

43. (Withdrawn) A method for increasing a specific density and an energy content of a gas comprising:

providing a pressure resistant piping system equipped with means for closing and opening said piping system;

providing means for filling up said piping system with a gas and means for compressing said gas to a desired pressure;

providing at least one solenoid acting on a tube in line with said piping system;

providing means for delivering an electric current to said at least one solenoid;

providing means for cooling said solenoid;

providing means for recirculating said gas through said tube;

providing means for collecting a resultant processed gas; and

filling said piping system with the gas to be processed, compressing said gas to the desired pressure, subjecting said gas to the current of the at least one solenoid acting on the tube while the gas is being recirculated through said tube and with the cooling means activated, and collecting said resultant processed gas,

wherein a resulting processed gas has a specific density and an energy content bigger than corresponding values of the gas first filled into the piping system.

44. (Withdrawn) The method according to Claim 43, wherein the electric current of said solenoid is continuous.

45. (Withdrawn) The method according to Claim 43, wherein the electric current of said solenoid is alternating.

46. (Withdrawn) The method according to Claim 43, wherein the electric current of said solenoid is pulsing.

47. (Withdrawn) The method according to Claim 43, wherein said gas is hydrogen.

48. (Withdrawn) The method according to Claim 43, wherein said gas is oxygen.

49. (Withdrawn) The method according to Claim 43, wherein said gas is a non-combustible gas.

50. (Withdrawn) The method according to Claim 43, wherein said gas is a gaseous hydrocarbon fuel.

51. (Withdrawn) The method according to Claim 43, wherein said gas is a liquid vapor.

52. (Withdrawn) The method according to Claim 43, wherein a number of said solenoids is placed in series and a number of said solenoids is placed in parallel within said piping system.

53. (Withdrawn) A method for producing a hydrogen gas with an increased specific density and an increased energy content comprising:

providing a pressure resistant vessel filled up with a liquid feedstock rich in hydrogen;

providing at least one pair of electrodes placed in such a way to create a submerged electric arc;

providing means for delivering an electric power to said at least one pair of electrodes;

providing means for collecting a combustible gas produced by said submerged electric arc;

providing means for separating a hydrogen content of said combustible gas, the hydrogen content comprising the produced hydrogen gas; and

subjecting the liquid feedstock to the submerged electric arc, collecting the combustible gas, and separating the hydrogen content of the combustible gas produced to obtain the resultant processed hydrogen gas,

wherein the resultant processed hydrogen gas has a specific weight and energy content greater than a corresponding value for conventional hydrogen gas.

54. (Withdrawn) The method according to Claim 53, wherein said produced hydrogen gas is separated from said combustible gas with filtration means.

55. (Withdrawn) The method according to Claim 53, wherein said produced hydrogen gas is separated from said combustible gas with means for cryogenically liquefaction of remaining components.

56. (Previously Presented) The apparatus according to Claim 1, wherein said means for generating the submerged magnetic field is at least one pair of electrodes placed within said piping system and capable of delivering an electric arc within an interior of the piping system.

57. (Withdrawn) The apparatus according to Claim 1, wherein said means for generating the submerged magnetic field is at least one solenoid acting on a tube in line with said piping system, the apparatus further comprising:

means for cooling said at least one solenoid.

58. (Withdrawn) The apparatus according to Claim 57, wherein when a plurality of solenoids is used, a number of said solenoids are placed in series and a number of said solenoids are placed in parallel within said piping system.

59. (Previously Presented) The method according to Claim 33, wherein said means for generating the submerged magnetic field is at least one pair of electrodes placed within said piping system and capable of delivering an electric arc within an interior of the piping system.

60. (Withdrawn) The method according to Claim 33, wherein said means for generating the submerged magnetic field is at least one solenoid acting on a tube in line with said piping system, the method further comprising:

providing means for cooling said at least one solenoid.

61. (Withdrawn) The method according to Claim 60, wherein when a plurality of solenoids is provided, a number of said solenoids are placed in series and a number of said solenoids are placed in parallel within said piping system.